



PTO/SB/08a/b (08-03)

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Substitute for form 1449A/B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Application Number	10/661,832
				Filing Date	September 12, 2003
				First Named Inventor	Qing Hu
				Art Unit	N/A 2828
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	101328-0177

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
AA	AA	US-6,144,679	11-07-2000	Herman, et al.	
AB	AB	US-6,563,622-B2	05-13-2003	Mueller, et al.	
ACE	ACE	US-5,936,989	08-10-1999	Capasso, et al.	
AD	AD	US-5,745,516	04-28-1998	Capasso, et al.	
AE	AE	US-5,509,025	04-16-1996	Capasso, et al.	
AF	AF	US-5,457,709	10-10-1995	Capasso, et al.	
AG	AG	US-6,188,477-B1	02-13-2001	Pu, et al.	
AH	AH	US-6,154,475	11-28-2000	Soref, et al.	
AI	AI	US-6,370,219-B1	04-09-2002	Peale	
AJ	AJ	US-6,472,683-B1	10-29-2002	Li	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY			

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
HR	CA	Kazarinov and Suris, "Possibility of the amplification of electromagnetic waves in a semiconductor and superlattice," Sov. Phys. Semicond. 5, 707 (1971)	
HR	CB	Faist, et al., "Quantum cascade laser," Science 264, 477 (1994)	
HR	CC	Beck, et al., "Continuous Wave Operations of a Mid-infrared Semiconductor Laser at Room Temperature," Science 295, 301 (2002)	
HR	CD	Helm, et al., "Intersubband Emission from Semiconductor Superlattices Excited by Sequential Resonant Tunneling," Phys. Rev. Lett. 63, 74 (1989)	
HR	CE	Kohler, et al., "Terehertz semiconductor-heterostructure laser," Nature, 417, 156 (2002)	
HR	CF	Tredicucci et al. "High performance interminiband quantum cascade lasers with graded superlattice," Appl. Phys. Letter. 73, 2101 (1998)	
HR	CG	Rochat, et al., "Low-threshold terahertz quantum-cascade lasers," Appl. Phys. Lett. 81, 1381 (2002)	
HR	CH	Williams, et al., "3.4-THz quantum cascade laser based on Longitudinal-optical-phonon scattering for depopulation," Appl. Phys., Lett. 82, 1015 (2003). Also published in Virtual Journal of Nanoscale Science & Technology, 7(8) (2003)	
HR	CI	Unterrainer, et al., "Quantum cascade lasers with double metal-semiconductor waveguide resonators," Appl. Phys. Lett. 80, 3060 (2002)	
HR	CJ	Lee, et al., "Au-In bonding below the eutectic temperature," IEEE Trans. Comp, Hybrids, Manuf. Technol. 16, 311 (1993)	

Examiner Signature	<i>[Signature]</i>	Date Considered	7/04/05
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Sheet	2	of	2	Attorney Docket Number	101328-0177

WBL	CK	Wang, et al., "Die bonding with Au/In isothermal solidification technique," J. Electron. Mat. 29, 443 (2000)	
DWL	CL	Wang, et al., "Stable and shallow PdIn ohmic contacts to n-GaAs," Appl. Phys. Lett. 56, 2129 (1990)	
TW	CM	Trocconi, et al., "Mid-infrared ($\lambda = 7.4 \mu\text{m}$) quantum cascade laser amplifier for high power single-mode emission and improved beam quality," Appl. Phys. Lett. 80, 4103 (2002)	
TW	CN	Mueller, et al., "2.5 THz Laser Local Oscillator for the EOS Chem 1 Satellite," Proceedings of the Ninth International Space Terahertz Technology Symposium, pp. 563-572, Pasadena, CA, March 17-19 (1998)	
TW	CO	Williams, et al., "Narrow-linewidth terahertz intersubband emission from three-level systems," American Institute of Physics (1999)	
TW	CP	Williams and Hu, "Optimized energy separation for phonon scattering in three-level terahertz intersubband lasers," American Institute of Physics (2001)	
TW	CQ	Xu and Hu, "Electrically pumped tunable terahertz emitter based on intersubband transition," American Institute of Physics (1997)	
TW	CR	Faist, et al., "Bound-to-Continuum and Two-Phonon Resonance Quantum-Cascade Lasers for High Duty Cycle, High-Temperature Operation," IEEE (2002)	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	<i>Julia Key</i>	Date Considered	7/05/05
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